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09/820,854	03/30/2001	Tatsurou Kawamura	43888-100	7033

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EXAMINER	
GORDON, BRIAN R	
ART UNIT	PAPER NUMBER
1743	

DATE MAILED: 03/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/820,854	KAWAMURA, TATSUROU	
	Examiner	Art Unit	
	Brian R. Gordon	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12-4-04*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 11-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-6,8,9,11,14,15,19,21,22,24 and 25* is/are rejected.

7)☐ Claim(s) *2,3,7,12,13,16-18,20 and 23* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Response to Arguments

3. Applicant's arguments filed December 4, 2004 have been fully considered but they are not persuasive.

The examiner extracted exact portions of the text of the prior art that clearly encompassed or disclosed the method steps claimed by applicant. Within the text, the examiner also included notes, circumscribed within parenthesis, to illustrate portions of the extracted text that the examiner considered equivalent to that claimed by applicant. However, as requested by applicant, the column and line numbers of the specific locations of the text and further explanation have been included herein.

Applicant asserts each of the applied references do not disclose the step of "verifying that a predetermine amount of said sample solution is held in said sample cell based on a change over time in an output signal from said photosensor" and asserts

both Pardikes and Laguana are directed to measuring the concentration of a component in a solution.

The examiner agrees both references do disclose measuring concentration. The examiner also submits that such a disclosure is equivalent to that as claimed by applicant. Applicant states that the polymer component is not a sample. The examiner, disagrees. As known in the art "a sample" may be considered to comprise numerous elements. A sample may be a portion of a whole element. One may also refer to an entire whole as a sample. Merriam-Webster's Collegiate Dictionary, 10th ed., defines "sample" as a representative part of a single item from a larger whole or group esp. when presented for inspection or shown as evidence of quality (see attachment). Applicant has not provided a special definition for the term "sample" within the specification. In light of such, the examiner asserts the polymer may be referred to as a sample and meets the broadest interpretation of the scope of the claims.

Furthermore, the term concentration is known as the measurement of "the **amount** of a component in a given area or volume." Applicant's claims do not recite a specific amount such as the total volume or any other limitations as directed to what the amount measured is limited to. The total volume or amount of the individual component may be determined from a concentration measurement. The claim only requires that the amount be predetermined. As previously recited, Pardikes discloses continuously monitoring the concentration of a substance in order to maintain the concentration at a preselected value during the time of operation of the device. In order to maintain a level of concentration it is inherent that measurements are taken periodically during that time

of operation to ensure that the concentration may be adjusted accordingly. Therefore, the assertion by applicant, the prior art is only directed to one end-result measurement, is incorrect. For the reasons given above the examiner considers the prior art disclosures equivalent to that as claimed by applicant.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims rejected 1, 8-9, 11, 19, 21, 22, and 24-25 under 35 U.S.C. 102(b) as being anticipated by Pardikes, US 5,730,937.

Pardikes discloses, "a polymer processing system has a polymer input and an electrolyte input which may be varied independently of each other. The polymer and electrolyte are combined and mixed to provide an out flowing solution which flows through a sensor cell that gives an output signal indicating the concentration of polymer in the solution leaving the processing system. **The user repeatedly and incrementally sets the inflows of polymer and electrolyte to provide a preselected variety of concentrations of polymer in the out flowing solution.** On each incremental setting, a memory stores information relating the concentration to the output signal. Thereafter, the processing system **automatically maintains any desired polymer concentration in joint response to the output signal and the stored information**." (see abstract)

As recited above the process of maintaining a preselected concentration is equivalent to verifying a predetermined amount as claimed.

The device is an automatic controller in combination with a polymer processing and delivery system for continuously controlling production of a polymer solution during operation of said polymer processing and delivery system, said controller comprising optical analyzer means using coherent light (light for irradiating a sample solution) for continuously (over time) monitoring a concentration (verifying an amount) of polymer solids and controlling a polymer solids/hydrocarbon concentration of a polymer solution product at least while the system is in operation, said analyzer means including a sample chamber coupled to continuously receive and at all times contain an instantaneous aqueous sample of said polymer solution product, means for emitting said coherent light with a controlled amplitude and frequency into said sample, said light energy being scattered and absorbed by the polymer material dispersed throughout the instantaneous aqueous sample within the sample chamber, optical receiver means for measuring an amount of said coherent light energy received after said light passes through said instantaneous sample, means for converting an output from said receiver means into a usable process control signal for controlling said polymer system in order to maintain a desired concentration and viscosity in said liquid, wherein said automatic controller controls a concentration of any selected one of a plurality of different types of polymers in an out flowing solution of said polymer processing and delivery system, said system including means for feeding an adjusted inflow of a selected polymer into said processing system, said selected polymer being one of said plurality of types of

polymer, means for feeding an adjusted electrolyte inflow into said system, means for delivering an outflow from said system comprising a solution having a combination of said selected polymer and electrolyte with a concentration of said selected polymer fixed by a relative proportion of said inflow of said selected polymer to said inflow of electrolyte, said controller comprising said optical analyzer means using coherent light for continuously monitoring the concentration of said selected polymer in said out flowing solution, means for repeatedly adjusting a ratio of said inflows of said selected polymer and electrolyte, means responsive to said optical analyzer means for pre-storing a memory of an information curve for said selected polymer at each of said repeated adjustments, means for repeating said selection of polymers with a different polymer being selected on each repeated selection, said repeated adjustments being made for each of said different polymers until information curves have been stored in memory for all of said plurality of types of polymer, said information curve memories representing at least an output of said optical analyzer means said concentration for each of said plurality of types of polymer in said out flowing solution, means jointly responsive to said stored information curve memories derived from said repeated adjustments and to an output of said optical analyzer means for providing a usable process control signal for controlling said system, and means responsive to said process control signal for adjusting said inflows of polymer and electrolyte to maintain a selected concentration of any selected one type of polymer in said solution in order to process said selected one type of polymer. (see column 11, line 61 – column 12, line 51; claim 1)

9. Claims rejected 1, 8-9, 11, 14-15, 19, 21, and 22 under 35 U.S.C. 102(b) as being anticipated by Laguana et al., US 5,871,698.

Laguna et al. discloses a chemical probe that can determine the concentration (verifying amount) of given chemicals in a fluid. The chemical probe has a reaction volume wherein the fluid to be analyzed (the analyte) can react with a known reagent. The chemical probe has means for launching light into the reaction volume, through the analyte/reagent reaction, to a collection point. The collected light can be analyzed to determine absorption properties of the analyte/reagent reaction, allowing determination of the concentration of the chemicals of interest in the analyte. The chemical probe allows the reaction volume to be flushed of the previous reaction, allowing multiple unattended measurements. The probe also provides for relatively slow analyte transport into the reaction volume and reagent transport out of the reaction volume, allowing measurements to be made directly in a large source of analyte without significantly contaminating the analyte. The chemical probe is well suited for in situ measurements because it can be made more compactly than previous chemical probes (column 1, lines 49-68).

FIG. 1 is a simplified diagram of a probe according to the present invention. Reaction volume 101 connects with reagent input means 110 for introducing a reagent into the reaction volume, analyte means 120 for introducing a chemical to be analyzed (the analyte) into the volume, flush means 150 for flushing the residue of the reaction, light launch means 130 for launching light into the reaction volume, and light collection means 140 for collecting light from the reaction volume. In operation, a reagent is

introduced into the reaction volume 101 via the reagent means 110. Analyte is introduced into the reaction volume 101 via the analyte means 120. As the reagent and analyte react, the light absorption properties of the fluid in the reaction volume 101 will change. The change in absorption properties can be determined by launching light into the reaction volume 101 via the light launch means 130 and collecting the light via the light collection means 140 after the light passes through the reaction volume 101 (measuring change over time). The determination can be done when the reaction is complete **or in time as the analyte flows in to the reaction volume**. The reagent can be chosen so that the reaction product's absorption properties vary based on the concentrations of predetermined chemicals in the analyte. The absorption of the launched light, as measured by the collected light, can thus be used to determine the relative concentrations of predetermined chemicals in the analyte. The reaction products can then be flushed from the reaction volume via flush means 150, and a new determination made by introducing new reagent and analyte into the reaction volume 101 (column 2, lines 32-60).

As recited above the determination of the concentration may be done in time or operation of the device. This is considered equivalent to applicants verifying step.

FIG. 7 is a schematic view of the reagent/waste portion of a chemical probe according to the present invention. A spring-loaded bellows reservoir 715 stores a quantity of reagent. The reservoir 715 can be filled via a fill port 714, such as a septum. Reagent flow through reagent fill tube 711 to the reaction volume 701 is controlled by a valve 713. The flow passes through a filter/frit 712, which controls the reagent flow rate

and prevents particle contaminants from reaching the reaction volume 701. Reagent/analyte reaction products are carried from the reaction volume 701 to a spring-loaded bellows reservoir 755 through flush tube 751. Flow through flush tube 751 is controlled by a valve 753. Waste fluid can be removed from the reservoir 755 via a waste removal port 754 such as a septum. The use of spring-loaded bellows reservoirs places the fluid in the system under positive pressure. Positive pressure prevents the formation of bubbles, important because bubbles can dramatically change the light absorption characteristics of the fluid in the reaction volume and thus impair the accuracy of the probe. In operation, valve 753 opens first. After about one second, valve 713 opens, allowing fresh reagent into the reaction volume 701. After about 2 seconds, valves 713, 753 both close and the light absorption measurements are performed (column 4, line 60 – column 5, line 16).

Allowable Subject Matter

12. Claims 2-3, 7, 12-13, 16-18, 20, and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach nor fairly suggest that step (b) is a step of verifying that the predetermined amount of said sample solution is held in said sample cell based on the fact that an absolute value of an amount of change in said out put signal per hour is maintained at a first predetermined value or less for a first predetermined duration or longer; verifying an amount of a sample solution in

accordance, wherein said sample solution is a urine, and the step (a) is a step of detecting at least one selected from the group consisting of a transmitted light component, a scattered light component and a reflected light component of a light by a photosensor while irradiating a urine, which is being injected into a sample cell provided in a hollow space of a toilet bowl, with said light.; transfusing the sample for the sample cell (as in claim 12) and measuring an angle of rotation (as in claim 13); analyzing a urine sample and the sample cell being included within a toilet bowl (as in claims 16 and 17).

Conclusion

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Gordon whose telephone number is 571-272-1258. The examiner can normally be reached on M-F, with 2nd and 4th F off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

brg

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